SEQUENCE LISTING

```
<110> HEINRICHS, VOLKER
5
           CHEN, TEDDY
           PATTEN, PHILLIP A.
     <120> IFN-ALPHA HOMOLOGUES
10
    <130> 02-101510/0140.002
     <140>
     <141>
15
    <150> 09/415.183
     <151> 1999-10-07
     <160> 88
20
    <170> PatentIn Ver. 2.0
     <210> 1
     <211> 498
     <212> DNA
25
     <213> Artificial Sequence
     <223> Description of Artificial Sequence: Synthetic DNA
30
     <220>
     <223> Clone ID 2DH12
     <400> 1
     tgtgatctgc ctcagaccca cagcettggc aacaggaggg cettgatget cetggcacaa 60
     atgggacgaa teteteettt eteetgeetg aaggacagae aagaetttgg atteeecag 120
35
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga ccttcaatct cttcagcaca aaggattcat ctgctgcttg ggaacagacc 240
     ctcctagaaa aattttccac tgaactctac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg taggggtgaa agagactece etgatgaatg tggactecat cetggetgtg 360
     aggaagtact tccaaagaat cactctttat ctaatagaga ggaaatacag cccttgtgca 420
40
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
     <210> 2
45
     <211> 498
     <212> DNA
     <213> Artificial Sequence
     <223> Description of Artificial Sequence: Synthetic DNA
50
     <223> Clone ID 2CA3
55
     <400> 2
     tgtgatctgc ctcagaccca cagccttggt gacaggaggg ccatgatact cctggcacaa 60
     atgggacgaa tctctccttt ctcctgcctg aaggacagat atgatttcgg attcccccag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
```

```
atccagcaga cottcaatot ottcagcaca aaggattcat otgotgottg ggaacagago 240
     ctcctagaaa aattttccac tgaactttac cagcagctga atgaactgga agcatgtgtg 300
     atacaggagg ttggggtggg agagactece etgatgaatg gggaeteeat eetggetgtg 360
     aagaagtact tecaaagaat cactetttat etaatagaga ggaaatacag ceettgtgea 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                        498
     <210> 3
     <211> 498
10
     <212> DNA
     <213> Artificial Seguence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
15
     <220>
     <223> Clone ID 4AB9
     <400> 3
20
     tgtgatctgc ctcagaccca cagccttggc aacaggaggg ccttgatact cctggcacaa 60
     atgggacgaa teteteettt eteetgeetg aaggacagae atgaetttgg atteeeegg 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atgcagcaga ccttcaatct cttcagcaca aagaactcat ctgctgcttg ggatgagacc 240
     ctcctagaaa aattttccac tgaactttac cagcaactga atgaactgga agcatgtgtg 300
25
     atacaggagg ttggggtgga agagactccc ctgatgaatg aggactccat cctggctgtg 360
     aagaaatact tegaaagaat cactettat etgacagaga agaagtatag ceettgttee 420
     toggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                        498
30
    <210> 4
     <211> 498
     <212> DNA
     <213> Artificial Sequence
35
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 2DA4
40
     <400> 4
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatgct cctggcacaa 60
     atgggaagaa teteteettt eteetgeetg aaggacagae aagaetttgg atteeecag 120
     gaggagtttg atagcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
45
     atgcagcaga cetteaatet etteagcaca aaggaeteat etgetgettg ggatgagace 240
     ctcctagaaa aattttccac tgaactctac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagaccccc ctgatgaatg tggactccat cctggctgtg 360
     aggaagtact tccaaagaat cactctttat ctaatagaga ggaaatacag cccttgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
50
     agattaagga ggaaggaa
    <210> 5
     <211> 498
     <212> DNA
55
    <213> Artificial Sequence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
```

```
<220>
     <223> Clone ID 3DA11
     <400> 5
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttggtact cctggcacaa 60
     atgggaagaa teteteettt eteetgeetg aaggacagat atgatttegg atteeeceag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cottoaatot ottoagcaca aaggattoat otgotgottg ggatgagaco 240
     ctcctaqaaa aattttccac tqaactttac caqcaqctqa atqacctqqa aqcctqcqtq 300
10
     atacaggagg ttggggtgga agagaccccc ctgatgaatg aggactccat cctggctgtg 360
     aaqaaatact tccaaaqaat cactctttat ctaataqaqa qqaaatacaq cccttqtqca 420
     tqqqaqqttq tcaqaqcaqa aatcatqaqa tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                        498
15
     <210> 6
     <211> 498
     <212> DNA
     <213> Artificial Sequence
20
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
     -220-
     <223> Clone ID 2DB11
25
     <400> 6
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatgct cctggcacaa 60
     atgggaagaa tototoottt otootgootg aaggacagat atgatttogg attoococag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
30
     atecagcaga cetteaatet etteageaca aaggatteat etgetgettg ggatgagace 240
     ctcctaqaaa aattttccac tqaactttac cagcagctga atgacttgga agcctgtgtg 300
     atacaqqaqq ttqqqqtqqa aqaqactccc ctqatqaatq tqqactccat cctggctgtg 360
     aggaagtact tccaaagaat cactctttat ctaatagaga ggaaatacag cccttgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
35
     agattaagga ggaaggaa
                                                                        498
     <210> 7
     <211> 498
     <212> DNA
40
     <213> Artificial Sequence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
45
     <223> Clone ID 2CA5
     <400> 7
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
50
     atgggacgaa teteteettt eteetgeetg aaggacagae aagaetttgg atteeecag 120
     gaggagtttg atggcaaccg gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cottogatot ottoggogo aggaetteat otgotgottg ggaacagage 240
     ctcctagaaa aattttccac tgaactctac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagaccccc ctgatgaatg aggactccat cctggctgtg 360
55
     aagaaatact tccaaagaat cactctttat ctaatagaga ggaaatacag cccttgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
```

```
<211> 498
     <212> DNA
     <213> Artificial Seguence
    <223> Description of Artificial Sequence: Synthetic DNA
    <220>
     <223> Clone ID 2G6
10
    <100 > 8
     tqtqatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
     atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg atteeecag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
15
     atccagcaga cetteaatet etteageaca aaggaeteat etgetaettg ggaacagage 240
     ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagactece etgatgaatg tggaccecat cetggetgtg 360
     aagaaatact tocaaagaat cactototat otgacagaga agaaatacag coottgtgcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
20
                                                                        498
    agattaagga ggaaggaa
     <210> 9
     <211> 498
     <212> DNA
25
     <213> Artificial Sequence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
30
    <220>
    <223> Clone ID 3AH7
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
     atgcgaagaa tototoottt otootgootg aaggacagac atgactttgg attoccocag 120
     qaqqaqtttg atagcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cetteaatet etteageaca aaggatteat etgetgettg ggaacagage 240
     ctcctagaaa aattttccac tgaacttcac cagcaactga atgaactgga agcatgtgta 300
     gtacaggagg ttggggtgga agagactece etgatgaatg aggactecat cetggetgtg 360
40
     aagaaatacc tccaaagaat cactctttat ctgacagaga agaagtatag cccttgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                        498
     <210> 10
45
     <211> 498
     <212> DNA
     <213> Artificial Sequence
     <220>
50
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 2G5
55
     <400> 10
     tqtqatctqc ctcagaccca cagccttggt aacaggaggg ccttgatgct cctggcacaa 60
     atqqqaaqaa tototoottt otootgootg aaggacagac aagactttgg attooccag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cottoaatot ottcagcaca aaggattoat otgotgottg ggaacagago 240
```

```
ctcctagaaa aattttccac tgaactctac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagacccc ctgatgaatg tggactccat cctggctgtg 360
     aggaagtact tecaaagaat cactetttat etaatagaga ggaaatacag eeettgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
    agattaagga ggaaggaa
     <210> 11
     <211> 498
     <212> DNA
10
     <213> Artificial Sequence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
15
     <223> Clone ID 2BA8
     <400> 11
     tgtgatetge etcagaceca cageettggt aacaggaggg ceetgatact eetggeacaa 60
20
     atgggacgaa tototoottt otootgootg aaggacagat atgatttogg attoccocag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tetetgteet ccatgagatg 180
     atccagcaga cetteaatet etteageaca aaggatteat etgetgettg ggaacagage 240
     ctcctagaaa aattttccac tgaactttac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagaccccc ctaatgaatg tggactccat cctggctgtg 360
25
     aggaagtact tecaaagaat eactetttat etaatagaga ggaaatacag eeettgtgea 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
     <210> 12
30
     <211> 498
     <212> DNA
     <213> Artificial Seguence
     -22DN
35
     <223> Description of Artificial Sequence: Synthetic DNA
     /22N>
     <223> Clone ID 1F3
40
     <400> 12
     totgatetge etcagaceca cageettggt aacaggaggg cettgatact cetgggacaa 60
     atgggaagaa teteteattt eteetgeetg aaggacagae atgaetttgg atteecceag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cottcaacot ottcagcaca aaggactcat otgttgottg ggatgagagg 240
45
     cttctagaca aactctatac tgaactttac cagcagctga atgacctgga agcctgtgtg 300
     atqcaqqagg tgtgggtggg agggactccc ctgatgaatg aggactccat cctggctgtg 360
     aqaaaatact tocaaagaat cactototat otgacagaga agaaatacag coottigtgoo 420
     tqqqaqqttq tcaqaqcaqa aatcatgaga tctttctctt tttcaacaaa cttqcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
50
     <210> 13
     <211> 498
     <212> DNA
     <213> Artificial Sequence
55
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
```

<211> 498

```
<223> Clone ID 4BE10
    <400> 13
    totgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacag 60
    atgggacgaa teteteettt eteetgeetg aaggacagat atgatttegg atteeceag 120
    gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagata 180
    atgcagcaga cetteaatet etteagcaca aagaacteat etgetgettg ggatgagace 240
    ctcctagaaa aattttccac tgaactttac cagcaactga atgaactgga agcatgtgtg 300
    atacaggggg ttggggtgga agagactccc ctgatgaatg aggactccat cttggctgtg 360
10
    aggaaatact tccaaagaat cactctttat ctgacagaga agaagtatag cccttgttcc 420
     tqqqaqqttq tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttqcaaaaa 480
                                                                        498
    agattaagga ggaaggaa
    <210> 14
15
    <211> 498
     <212> DNA
     <213> Artificial Sequence
    <220>
20
    <223> Description of Artificial Sequence: Synthetic DNA
     <220>
    <223> Clone ID 2DD9
25
    <400> 14
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatgct cctggcacaa 60
    atgggaagaa totoccottt otoctgootg aaggacagat atgatttogg attoccocag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
    atccagcaga cetteaatet etteageaca aaggatteat etgetgettg ggaacagage 240
30
    ctcctaqaaa aattttccac tggactctac cagcagctga atgacctgga agcctgcgtg 300
    atacaggagg ttggggtgga agagaccccc ctgatgaatg aggactccat cctggctgtg 360
     aagaaatact tccaaagaat cactctttat ctgacagaga agaagtatag cccttgttcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
35
    <210> 15
     <211> 498
     <212> DNA
     <213> Artificial Seguence
40
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
45
     <223> Clone ID 3CA1
     <400> 15
     tgtgatctgc ctcagaccca cagccttggc aacaggaggg ccttgatact cctggcacaa 60
     atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg attaccecag 120
50
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccaqcaqa cettcaatet ettcagcaca aagaactcat etgetgettq qqatqagace 240
    ctcctagaaa aattttccac tgaactttac cagcaactga ataacctgga agcatgtgtg 300
     atacaggagg ttgggatgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
    aaqaaatact tccaaagaat cactctttat ctgacagaga agaagtatag cccttgtgcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
55
    agattaagga ggaaggaa
     <210> 16
```

```
<212> DNA
     <213> Artificial Sequence
5
     <223> Description of Artificial Sequence: Synthetic DNA
     <220×
     <223> Clone ID 2F8
10
    <400> 16
     totgatetge etcagaceca cageettggt aacaggaggg cettgatact cetggcacaa 60
     atgggacgaa teteteettt eteetgeetg aaggacagat atgatttegg atteeceag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atgcagcaga cettcaatet ettcagcaca aagaactcat etgetgettg ggatgagace 240
15
    ctectagaaa aatttteeac tgaactttac cagcaactga atgaactgga agcatgtgtg 300
     atacaggagg ttggggtgga agagactccc ctgatgaatg aggactccat cctggctgtg 360
     aagaaatact tccaaagaat cactctttat ctgacagaga agaagtatag cccttgttcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
20
    <210> 17
     <211> 498
     <212> DNA
     <213> Artificial Sequence
25
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
30
    <223> Clone ID 6CG3
     <400> 17
     totgatctgc ctcagaccca cagccttggt aacaagaggg ccatgatgct cctggcacaa 60
     atgggaagaa ceteteettt eteetgtetg aaggacagae atgaetttgg atteeeceag 120
35
     gaggagtttg atggcaacca gttccagagg gctcaagcca tctttgtcct ccatgagatg 180
     atccagcaga cetteaattt etteageaca aaggaeteat etgetgettq qqaacagage 240
     ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300
     atacaggaag ttggggtgga agagactccc ctgatgaatg aggactccat cctggctgtg 360
     aagaaatact tecaaagaat cactetttat etgacagaga agaaatacag eeettgtgee 420
40
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                        498
    <210> 18
     <211> 498
45
     <212> DNA
     <213> Artificial Seguence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
50
     <220>
     <223> Clone ID 3CG7
     <400> 18
55
     tgtgatctgc ctcagaccca cagccttggt aacagtaggg ccttgatgct cctggcacaa 60
     atgggaagaa teteceettt eteetgeetg aaggacagae atgatttegg atteceecag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgcctt ccatgagatg 180
     atccagcaga cetteaatet etteageaca aaggatteat etgetgettg ggaacagaac 240
     ctcctagaaa aattttccac tgaactttac cagcaactga ataacctgga agcatgtgtg 300
```

```
atacaggagg ttgggatgga agagacteee etgatgaatg tggacteeat eetggetgtg 360
     aggaagtact tecaaagaat cactetttat etaatagaga ggaaatacag ceettgtgee 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
 5
     <210> 19
     <211> 498
     <212> DNA
     <213> Artificial Sequence
10
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
15
    <223> Clone TD 1D3
     <400> 19
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
    atgggaagaa teteteattt eteetgeetg aaggacagae atgatttegg atteeceag 120
20
    gaggagtttg atggccacca gttccagaag actcaagcca tctctgtcct ccatgagatg 180
    atccagcaga cettcaatet ettcagcaca aaggactcat etgetgettg ggaacagage 240
    ctcctagaaa aattttccac tgaactttac cagcaactga atgacctgga agcatgtgtg 300
    atacaggagg ttggggtgga agagactccc ctgatgaatg aggactccat cctggctgtg 360
     aagaaatact tecaaagaat cactetttat etgatggaga agaaatacag ceettgtgee 420
25
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
    agattaagga ggaaggaa
                                                                        498
    <210> 20
     <211> 498
30
     <212> DNA
     <213> Artificial Sequence
     <223> Description of Artificial Sequence: Synthetic DNA
35
     <220>
    <223> Clone ID 2G4
     <400> 20
40
     tqtqatctgc ctcagaccca cagccttggt aacaggaggg ccatgatgct cctggcacaa 60
    atgagcagaa teteteette eteetgtetg atggacagae atgaetttga attteeccag 120
    gaggaatttg atgataaaca gttccagaag gctccagcca tctctgtcct ccatgaggtg 180
    atteageaga cetteaatet etteageaca gaggaeteat etgetgettg ggaacagace 240
    ctcctagaaa aattttccac tgaactttac cagcaactga atgacctgga agcatgtgtg 300
45
    atgeaggagg agagggtggg agaaactccc ctgatgaatg cggactccat cttggctgtg 360
     aggaaatact tccaaagaat cactctttat ctgacaaaga agaagtatag cccttgttcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
    agattaagga ggaaggaa
                                                                        498
50
    <210> 21
    <211> 498
     <212> DNA
    <213> Artificial Sequence
55
    <220>
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 1A1
```

<212> DNA

<400> 21 tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa tototoattt otootgootg aaggacagat atgatttogg attoococag 120 gaggtgtttg atggcaacca gttccagaag gcccaagcca tctctgcctt ccatgagatg 180 atgcagcaga cettcaatet ettcagcaca gaggaeteat etgetgettg ggaacagage 240 ctcctagaaa aattttccac tgaacttcac cagcaactga atgacctgga agcctgtgtg 300 atacaggagg ttggggtgga agagacteee ctgatgaatg aggacteeat cetggetgtg 360 aggaaatact ttcaaagaat cactctttat ctaatggaga agaaatacag cccttgtgcc 420 10 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 agattaagga ggaaggaa 498 <210> 22 <211> 498 15 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic DNA 20 <220> <223> Clone ID 1D10 <400> 22 25 tqtqatctqc ctcaqaccca caqccttgqt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa tototoattt otootgootg aaggacagac atgatttogg attooccag 120 qaqqaqtttq atqqccacca qttccagaaq actcaagcca tctctgtcct ccatgagatg 180 atccaqcaqa cetteaatet etteageaca aaggaeteat etgetgettq qqaacaqaqe 240 ctcctaqaaa aattttccac tgaactttac cagcaactga atgacctgga agcatgtgtg 300 30 atacaggagg ttggggtgga agagactccc ctgatgaatg aggactccat cctggctgtg 360 aaqaaatact tccaaaqaat cactctttat ctgatggaga agaaatacag cccttgtgcc 420 tqqqaqqttq tcaqagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 agattaagga ggaaggaa 498 35 <210> 23 <211> 498 <212> DNA <213> Artificial Sequence 40 <220> <223> Description of Artificial Sequence: Synthetic DNA <220> <223> Clone ID 1F6 45 <400> 23 tgtgatctgc ctcagaccca cagccttgqt aacaggagga ctttgatgat aatggcacaa 60 atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg attteeceag 120 gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180 50 atccagcaga cottoaatot ottoagcaca aaggactoat otgotacttg ggaacagage 240 ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300 atacaggagg ctggggtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360 aaqaaatact tccaaaqaat cactctttat ctaacagaga agaaatacag cccttgtgcc 420 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 55 agattaagga ggaaggaa <210> 24 <211> 498

<213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic DNA 5 <220> <223> Clone ID 2A10 <400> 24 10 tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa teteteattt eteetgeetg aaggacagat atgatttegg atteeccag 120 gaggtgtttg atggcaacca gttccagaag gctcaagcca tctctgcctt ccatgagatg 180 atccaqcaqa cettcaatet ettcagcaca aaggactcat etgetaettg ggaacagage 240 ctcctagaaa aattttccac tgaactttac cagcaactga ataacctgga agcatgtgtg 300 15 atacaggagg ttggggtgga agagacteee etgatgaatg aggacteeat cetggetgtg 360 aqqaaatact ttcaaagaat cactctttat ctgatggaga agaaatacag cccttgtgcc 420 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 agattaagga ggaaggaa 198 20 <210> 25 <211> 498 <212> DNA <213> Artificial Seguence 25 <220> <223> Description of Artificial Sequence: Synthetic DNA <220> <223> Clone ID 2C3 30 <400> 25 tqtqatctqc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa tototoottt otootgootg aaggacagac atgactttgg atttootcag 120 gaggagtttg atggcaacca gtcccagaag gctcaagcca tctctgtcct ccatgagatg 180 atccagcaga cetteaatet etteageaca aaggaeteat etgataettg ggatgegace 240 35 cttttagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300 atacaqqaqq ttqqqqtqqa agagaccccc ctgatgaatg tggactccat cctggctgtg 360 aaqaaatact tocaaagaat cactotttat otgacagaga agaaatacag coottgtgoo 420 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 40 agattaagga ggaaggaa <210> 26 <211> 498 <212> DNA 45 <213> Artificial Sequence -22N> <223> Description of Artificial Sequence: Synthetic DNA 50 <220> <223> Clone ID 2D1 <400> 26 tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 55 atgggacgaa tctctccttt ctcctgcctg aaggacagac aagactttgg attcccccag 120 gaggagtttg atggcaaccg gttccagaag gctcaagcca tctctgtcct ccatgagatg 180 atccagcaga cottoaatot ottcagcaca aagaactcat otgotgottg ggaacagago 240 ctcctagaaa aattttccac tgaactctac cagcagctga atgacctgga agcctgcgtg 300 atacaggagg ttggggtgga agagaccccc ctgatgaatg aggactccat cctggctgtg 360

```
aagaaatact tccaaagaat cactctttat ctaatagaga ggaaatacag cccttgtgca 420
     toggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
5
    <210> 27
    <211> 498
     <212> DNA
     <213> Artificial Sequence
10
     <223> Description of Artificial Sequence: Synthetic DNA
     <223> Clone ID 2D10
15
     <400> 27
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
     atgggaagag teteteettt eteetgeetg aaggacagae atgaetttgg atteeeceag 120
     qaggagtttg atggcaacca gttccagaag gctcaagcca tctctgcctt ccatgagatg 180
20
     atccagcaga cetteaatet etteageaca aaggaeteat etgetaettg ggaacagage 240
     ctcctagaaa aattttccac tgaactttac cagcaactga ataacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
     aagaaatact toogaagaat cactototat otgacagaga agaaatacag coottgtgoo 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
25
     agattaagga ggaaggaa
                                                                        498
    <210> 28
     <211> 498
     <212> DNA
30
     <213> Artificial Sequence
     <220>
     <223> Description of Artificial Sequence: Synthetic DNA
35
     <223> Clone ID 2D7
     <400> 28
     tgtgatctgc ctcagaccca cagccttggt aacaggcggg ccttgatact cctggcacaa 60
40
     atgggaagaa teteteettt eteetgtetg aaggacagae atgaetteag attteeceag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cetteaatet etteageaca aaggaeteat etgetaettg ggaacagage 240
     ctcctagaaa aattttccac tgaactttac cagcaactga ataacctgga agcttgcgtg 300
     atacaggagg ttggggtgga agagactccc ctgatgaatg tggactctat cctggctgtg 360
45
     aagaaatact tccaaagaat cactctttat ctgacagaga ggaaatacag cccttgtgcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
    <210> 29
50
     <211> 498
     <212> DNA
     <213> Artificial Sequence
55
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 2D9
```

<212> DNA

<213> Artificial Sequence

```
<400> 29
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
     atgggaagaa tototoottt otootgootg aaggacagac atgactttgg attooccag 120
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
    atccaqcaga ctttcaatct cttcagcaca aaggactcat ctgctacttg ggaacagagc 240
     ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300
     atacaggagg ttggggtgga agagactccc ctggtgaatg tggactccat cctqqctqtq 360
     aagaaatact tccaaagaat cactctttat ctgacagaga agaaatacag cccttgtgcc 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
10
    agattaagga ggaaggaa
                                                                       498
     <210> 30
     <211> 498
     <212> DNA
15
     <213> Artificial Sequence
     <223> Description of Artificial Sequence: Synthetic DNA
20
     <220>
     <223> Clone ID 2DA2
     <400> 30
     tgtgatctgc ctcagaccca cagccttggt aacaggaggc ccttgatact cctggcacaa 60
25
     atgggaagaa tototoottt otootgootg aaggacagac aggacttogg attooccoag 120
    gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atgragraga cetteaatet etteagraca aagaacteat etgetgettg ggaacagage 240
    ctcctagaaa aattttccac tgaactccac cagcaactga atgaactgga agcatgtgtg 300
    atacaggagg ttggggtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
30
    aagaaatact tocaaagaat cactotttat otaatagaga ggaaatacag coottgtgca 420
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
                                                                       498
    <210> 31
35
     <211> 498
     <212> DNA
     <213> Artificial Sequence
     <220>
40
    <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 2DH9
45
     <400> 31
     tgtgatctgc ctcagaccca cagccctggt aacaggaggg ccttgatgct cctggcacaa 60
     atgggacgaa tototoottt otootgootg aaggacagat atgatttogg attooccag 120
     ggggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
    atgcagcaga cottoaatot ottoagcaca aaggattoat otgotgottg ggaacagago 240
50
     ctcctagaaa aattttccac tgaactctac cggcagctga atgacctgga agcctgtgtg 300
    atacaggagg ttggggtgga agagaccccc ctgatgaatg tggactccat cctggctgtg 360
     aggaagtact tecaaagaat cactettat etgacagaga agaagcatag ceettgttee 420
     toggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
55
    <210> 32
     <211> 498
```

```
<223> Description of Artificial Sequence: Synthetic DNA
     <223> Clone ID 2G11
    <400> 32
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
10
     atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg aetteeceag 120
     gaggagtttg atggcaacca gttccagaag actcaagcca tctctgtcct ccatgagatg 180
     atccagcaga cetteaatet etteageaca aaggaeteat etgataettg ggaacagage 240
     ctcctaqaaa aattctacat tgaacttttc cagcagctga atgacctgga agcctgcgtg 300
     atacaqqaqg ttggggtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360
15
     agaaaatact teeaaagaat cactetttat etgacagagg agaaatacag ceettgtgee 420
     toggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
     <210> 33
20
     <211> 498
     <212> DNA
     <213> Artificial Sequence
     <220>
25
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
     <223> Clone ID 2G12
30
     <400> 33
     totoatetoe etcagaceca cageettogt aacaggagga etttgatget catggcacaa 60
     atgaggagaa tototoottt coccegectg aaggacagat atgatttogg attoccccag 120
     qaggtqtttg atggcaacca gttccagaag gctcaagcta tcttcctttt ccatgagatg 180
     atgcagcaga cetteaatet etteagcaca aagaacteat etgetgettg ggatgagace 240
35
     ctcctagaca aattctacac tgaactctac cagcagctga atgacttgga agcctgtgtg 300
     atgcaggagg ggagggtggg agaaacteee etgatgaatg eggaeteeat ettggetgtg 360
     aagaaatact teegaagaat caetetetat etgacagaga agaaatacag ceettgtgee 420
     tgggaggctg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                        498
     agattaagga ggaaggaa
40
     <210> 34
     <211> 498
     <212> DNA
     <213> Artificial Sequence
45
     <22N>
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
50
     <223> Clone ID 2H9
     <400> 34
     tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
     atgggaagaa tototoottt otootgootg aaggacagac atgactttgg attoocccag 120
55
     gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
     atccagcaga ccttcaatct cttcagcaca aaggactcat ctgctacttg ggaacagage 240
     ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctaga agcctgtgtg 300
     acacaggagg ttggggtgga agagacteec etgatgaatg aggactetat eetggetgtg 360
     aagaaatact tecaaagaat caetetttat etgacagaga agaaatacag eeettgtgee 420
```

10

15

20

25

30

35

40

45

50

55

tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 agattaagga ggaaggaa <210> 35 <211> 498 <212> DNA <213> Artificial Seguence -22NN <223> Description of Artificial Sequence: Synthetic DNA <220> <223> Clone ID 6BC11 <400> 35 tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa tototoottt otootgootg aaggacagat atgatttogg attoococag 120 gaggagtttg atggcaacca gctccagaag gctcaagcca tctctgtcct ccatgagatg 180 atccagcaga cottcaatot ottcagcaca aaggattcat otgotgottg ggaacagago 240 ctcctagaaa aattttccac tgaacttaac cagcagctga atgacctgga agcctgcgtg 300 atacaggagg ttggagtgga agagactccc ctgatgaatg tggactccat cctggctgtg 360 aagaaatact tccaaagaat cactctttat ctgacagaga ggaaatacag cccttgtgcc 420 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 498 agattaagga ggaaggaa <210> 36 <211> 166 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic amino acid <220> <223> Clone ID 2DH12 <400> 36 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Met 10 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp Arg Gln Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Thr 65 70 Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly Val Lys Glu Thr Pro Leu Met 100 105 Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr

136

45

50

115 120 125

Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140

- 5 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160
- Arg Leu Arg Arg Lys Glu 10 165

<210> 37 <211> 166

15 <211> 166 <212> PRT <213> Artificial 9

<213> Artificial Sequence

<220>

 $$^{22}>$$ Description of Artificial Sequence: Synthetic amino acid $$^{22}>$$

<223> Clone ID 2CA3

<400> 37

25 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asp Arg Arg Ala Met Ile $\frac{1}{5}$ 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 20 25 30

30 Arg Tyr Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Ser 65 70 75 80

- 40 Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Glu Leu 85 90 95
 - Glu Ala Cys Val Ile Glu Glu Val Gly Val Gly Glu Thr Pro Leu Met $100 \\ 0.05 \\ 105 \\ 110$
 - Asn Gly Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 115 120 125
 - Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140
 - Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160
- 55 Arg Leu Arg Arg Lys Glu 165

<210> 38

	<212	> 16 ?> PF 8> A1		cial	L Sec	quenc	ce									
5	<220 <223		escri	ptic	on of	E Art	ifi.	cial	Sequ	ience	e: S)	nthe	etic	amir	no ac	id
10	<220 <223		one	ID 4	1AB9											
)> 38 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
15	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
20	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Arg 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
20	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Met	Gln	Gln	Thr
25	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asn	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Glu 95	Leu
30	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
35	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
33	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ser 140	Trp	Glu	Val	Val
40	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
	Arg	Leu	Arg	Arg	Lys 165	Glu										
45	<211 <212)> 39 l> 16 2> Pi 3> Ai	56	icia	l Sed	ruen	ce									
50	<220)>						cial	Sequ	uence	e: S:	ynthe	etic	amin	no ac	cid
55	<220 <223		lone	ID :	2DA4											
)> 3! Asp		Pro	Gln 5	Thr	His		Leu			Arg	Arg	Ala	Leu 15	Met

	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
5	Arg	Gln	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Ser 45	Asn	Gln	Phe
10	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Met	Gln	Gln	Thr
10	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
15	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
20	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
25	Leu	Tyr 130	Leu	Ile	Glu	Arg	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
25	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
30	Arg	Leu	Arg	Arg	Lys 165	Glu										
35	<213	0> 40 l> 10 2> Pi 3> Ai	56 RT	icial	. Sec	quenc	ce									
40	<220 <220															
			escr:	ptic	on of	EArt	cific	cial	Sequ	ence	e: S)	nthe	etic	amir	no ac	id
40	<220 <22			_			cific	cial	Sequ	ience	e: S)	/nthe	etic	amir	no ao	cid
40 45	<223 <400 Cys	0> 3> C: 0> 40	lone	ID 3	BDA1:	L				Gly					Leu	
	<223 <400 Cys 1	0> 3> C: 0> 40 Asp	lone) Leu	ID 3	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu	Val
	<223 <400 Cys 1 Leu	0> 3> C: 0> 40 Asp Leu	lone) Leu Ala	ID 3	Gln 5 Met	Thr Gly	His Arg	Ser Ile	Leu Ser 25	Gly 10 Pro	Asn Phe	Arg Ser	Arg Cys	Ala Leu 30	Leu 15	Val Asp
45	<223 <400 Cys 1 Leu	0> 3> C: 0> 40 Asp Leu	lone Leu Ala Asp 35	ID 3	Gln 5 Met Gly	Thr Gly Phe	His Arg Pro	Ser Ile Gln 40	Leu Ser 25 Glu	Gly 10 Pro Glu	Asn Phe	Arg Ser Asp	Arg Cys Gly 45	Ala Leu 30 Asn	Leu 15 Lys	Val Asp Phe

	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
5	Glu	Ala	Сув	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
10	Leu	туr 130	Leu	Ile	Glu	Arg	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
15	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
10	Arg	Leu	Arg	Arg	Lys 165	Glu										
20	<213	0> 4: 1> 16 2> PI 3> Ai	56	icial	l Sed	quenc	e:									
25	<220 <22		escr	iptic	on o	E Art	ific	cial	Sequ	ience	e: Sy	nthe	etic	amiı	no ac	cid
30	<220 <220		Lone	ID 2	2DB1:	L										
)> 4: Asp	l Leu	Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Met
35	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Суз	Leu 30	Lys	Asp
40	Arg	Tyr	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
40	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
45	Phe 65	Asņ	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
50	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
55	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys $$140\$

<210> 42 <211> 166

<212> PRT

10 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic amino acid

15

OGENETRO LOGGO

30

45

<223> Clone ID 2CA5

<400> 42

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile $20 \ \ 1 \ \ 5 \ \ 10 \ \ 15$

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 20 25 30

25 Arg Gln Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Arg Phe 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Glu Gln Ser 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 35 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110 \hspace{1.5cm}$

40 Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr \$115\$ 120 $\dot{}$ 125

Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150150155155

Arg Leu Arg Arg Lys Glu 50 165

<210> 43

<211> 166 55 <212> PRT

<213> Artificial Sequence

-220-

<223> Description of Artificial Sequence: Synthetic amino acid

35

50

<220> <223> Clone ID 2G6

5 <400> 43 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp $10 \hspace{1.5cm} 20 \hspace{1.5cm} 25 \hspace{1.5cm} , \hspace{1.5cm} 30 \hspace{1.5cm}$

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 40 45

15 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met
25 100 105 110

Asn Val Asp Pro Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 115 120 125

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

40 <210> 44 <211> 166 <212> PRT

<213> Artificial Sequence

<213> Artificial
45 <220>

<223> Description of Artificial Sequence: Synthetic amino acid

<220> <223> Clone ID 3AH7

<400> 44 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 1 5 10 15

55 Leu Leu Ala Gln Met Arg Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Ser Asn Gln Phe 35 40 45

	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
5	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
10	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	His 90	Gln	Gln	Leu	Asn	Glu 95	Leu
	Glu	Ala	Cys	Val 100	Val	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
15	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Leu	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
20	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
25	Arg	Leu	Arg	Arg	Lys 165	Glu										
30	<212	0> 4! l> 1! 2> P! 3> A:	56 RT	icial	l Sed	quen	ce								•	
	<220 <220		escr:	iptio	on o	E Ar	tific	cial	Seq	1enc	e: S	ynth	etic	ami	no ac	cid
35	<220 <220		lone	ID 2	2G5											
40		0> 4: Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Met
	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
45	Arg	Gln	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
50	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	G1n	Gln	Thr
30	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
55	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met

Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 115 120 Leu Tvr Leu Ile Glu Arg Lys Tvr Ser Pro Cys Ala Trp Glu Val Val 5 135 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 10 Arg Leu Arg Arg Lys Glu <210> 46 15 <211> 166 <212> PRT <213> Artificial Sequence <220> 20 <223> Description of Artificial Sequence: Synthetic amino acid <220> <223> Clone ID 2BA8 25 <400> 46 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 30 25 Arg Tyr Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 40 35 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Ser 40 Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 45 Asn Val Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 120

50 Leu Tyr Leu Ile Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

	<21 <21	0> 4' 1> 10 2> Pl 3> Ar	56 RT	iciai	l Sed	quen	ce									
5	<22 <22	0> 3> De	escr	iptic	on o	E Art	cific	cial	Sequ	ience	e: S)	nthe	etic	amir	no ac	eid
10	<22 <22	0> 3> C:	lone	ID :	1F3											
15		0> 4° Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
	Leu	Leu	Gly	Gln 20	Met	Gly	Arg	Ile	Ser 25	His	Phe	Ser	Cys	Leu 30	Lys	Asp
20	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
25	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Val 75	Ala	Trp	Asp	Glu	Arg 80
80	Leu	Leu	Asp	Lys	Leu 85	Tyr	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
,0	Glu	Ala	Cys	Val 100	Met	Gln	Glu	Val	Trp 105	Val	Gly	Gly	Thr	Pro 110	Leu	Met
35	Asn	G1u	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
Ю	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
15	Arg	Leu	Arg	Arg	Lys 165	Glu										
50	<21 <21	0 > 48 1 > 16 2 > PI 3 > A	56 RT	icial	l Sed	quenc	ce									
	<22 <22)> 3> De	escr	iptic	on of	E Art	ific	cial	Segu	ience	e: S <u>\</u>	nthe	etic	amir	no ao	eid
55	<22 <22	0> 3> C:	lone	ID 4	4BE1)										
		0> 48 Asp		Pro	Gln	Thr	His	Ser		Gly 145	Asn	Arg	Arg	Ala	Leu	Ile

Ф	
Ø1	
Ü	
Uī	
1	
ω	
Ø	
8	
4	
a	
m	
o	

	1				5					10					15	
5	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Суз	Leu 30	Lys	Asp
3	Arg	Tyr	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
10	G1n	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Ile 60	Met	Gln	Gln	Thr
	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asn	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
15	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Glu 95	Leu
20	Glu	Ala	Cys	Val 100	Ile	Gln	Gly	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
20	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
25	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ser 140	Trp	Glu	Val	Val
	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
30	Arg	Leu	Arg	Arg	Lys 165	Glu										
35	<213	0> 49 1> 16 2> PI 3> A	56 RT	icia	l Sed	quenc	ce									
10	<220 <220		escr:	iptio	on o	f Art	tifi	cial	Sequ	uence	e: Sy	nthe	etic	amiı	no ac	cid
	<220 <223		lone	ID :	2DD9											
15		0> 49 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Met
50	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
	Arg	Tyr	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
55	Gln	Lys	Ala	Gln	Ala	Ile	Ser	Val	Leu	His	Glu	Met	Ile	Gln	Gln	Thr

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Ser 65 70 75 80

	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Gly	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
5	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
10	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
10	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ser 140	Trp	Glu	Val	Val
15	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
	Arg	Leu	Arg	Arg	Lys 165	Glu										
20	<212	0> 50 L> 16 2> PI	56 RT						,							
25	<220)>	rtifi escri					cial	Sequ	1ence	e: S)	nthe	etic	amiı	no ao	cid
30	<220 <220		Lone	ID 3	3CA1											
35)> 5(Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
33	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
40	Arg	His	Asp 35	Phe	Gly	Leu	Pro	Gln 40	Glu	Glu	Phe	Asp	G1y 45	Asn	Gln	Phe
	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
45	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asn	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
50	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Met	Glu	Glu	Thr	Pro 110	Leu	Met
55	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val

15

20

25

30

35

40

45

145

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 155 145 150 Arg Leu Arg Arg Lys Glu 165 <210> 51 <211> 166 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic amino acid <220> <223> Clone ID 2F8 <400> 51 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 10 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 25 Arg Tyr Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Met Gln Gln Thr 55 Phe Asn Leu Phe Ser Thr Lys Asn Ser Ser Ala Ala Trp Asp Glu Thr 70 Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Glu Leu Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 120 Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ser Trp Glu Val Val 130 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys

50 Arg Leu Arg Arg Lys Glu 165

150

<210> 52
55 <211> 166
<212> PRT
<213> Artificial Sequence
<220>

155

<223> Description of Artificial Sequence: Synthetic amino acid	
<220> <223> Clone ID 6CG3	
$<\!400>52$ Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Lys Arg Ala Met Met 1 51015	
Leu Leu Ala Gln Met Gly Arg Thr Ser Pro Phe Ser Cys Leu Lys Asp $20 \\ 25 \\ 30$	
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 40 45	
Gln Arg Ala Gln Ala Ile Phe Val Leu His Glu Met Ile Gln Gln Thr $50 \\ 0000000000000000000000000000000000$	
Phe Asn Phe Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Ser 65 70 75 80	
Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu $85_{ \odot}$	
Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 100 $$105$$	
Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr $115 \ 120 \ 125$	
Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 $$135$$	
Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 $$150\ $	
Arg Leu Arg Arg Lys Glu 165	
<210> 53 <211> 166 <212> PRT <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: Synthetic amino acid	
<220> <223> Clone ID 3CG7	
<400> 53 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Ser Arg Ala Leu Met 1 5 10 10 15	
Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp $20 \\ 25 \\ 30$	
Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe	

35 40 45

5	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Ala	Phe	His	Glu	Met 60	Ile	Gln	Gln	Thr
3	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Asn 80
10	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Met	Glu	Glu	Thr	Pro 110	Leu	Met
15	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
20	Leu	Tyr 130	Leu	Ile	Glu	Arg	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
-0	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
25	Arg	Leu	Arg	Arg	Lys 165	Glu										
30	<213 <213 <213		56 RT	icial	L Sec	quenc	ce									
35	<220 <220		escr:	iptio	on of	E Art	ific	cial	Sequ	uence	e: Sչ	nthe	etic	amin	no ac	cid
	<220 <220		lone	ID 3	LD3											
40)> 54 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
45	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	His	Phe	Ser	Cys	Leu 30	Lys	Asp
+3	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	His	Gln	Phe
50	Gln	Lys 50	Thr	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
55	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met $100 \,$

Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Met Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lvs 155 145 10 Arg Leu Arg Arg Lys Glu 165 15 <210> 55 <211> 166 <212> PRT <213> Artificial Sequence 20 <2200> <223> Description of Artificial Sequence: Synthetic amino acid <220> <223> Clone ID 2G4 25 <400> 55 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Met Met 30 Leu Leu Ala Gln Met Ser Arg Ile Ser Pro Ser Ser Cys Leu Met Asp 25 Arg His Asp Phe Glu Phe Pro Gln Glu Glu Phe Asp Asp Lys Gln Phe 35 Gln Lys Ala Pro Ala Ile Ser Val Leu His Glu Val Ile Gln Gln Thr 55 Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Thr 40 70 Leu Leu Glu Lys Phe Ser Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 45 Glu Ala Cys Val Met Gln Glu Glu Arg Val Gly Glu Thr Pro Leu Met 105

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

<210> 56 <211> 166 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic amino acid 10 <220> <223> Clone ID 1A1 <400> 56 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 15 Leu Leu Ala Gln Met Gly Arg Ile Ser His Phe Ser Cys Leu Lys Asp 20 Arg Tyr Asp Phe Gly Phe Pro Gln Glu Val Phe Asp Gly Asn Gln Phe Gln Lys Ala Gln Ala Ile Ser Ala Phe His Glu Met Met Gln Gln Thr 25 Phe Asn Leu Phe Ser Thr Glu Asp Ser Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu His Gln Gln Leu Asn Asp Leu 30 Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 100 105 35 Asn Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr 120 Leu Tyr Leu Met Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 135 40 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 155 Arg Leu Arg Arg Lys Glu 45 165 <210> 57 <211> 166 50 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic amino acid 55 <223> Clone ID 1D10 <400> 57

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 5 25 Arg His Asp Phe Arg Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Leu 10 Gln Lvs Thr Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser 15 Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Glu Glu Thr Pro Pro Met 20 Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 25 Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 155 145 30 Arg Leu Arg Arg Lys Glu 165 35 <210> 58 <211> 166 <212> PRT <213> Artificial Sequence 40 <220> <223> Description of Artificial Sequence: Synthetic amino acid <220> <223> Clone ID 1F6 45 <400> 58 Cvs Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Thr Leu Met 50 Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 55 Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 55

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser

C
4
m
Œ,
U
with
颐
Û
8
lovéh
m

	65					70					75					80
-	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Asn 90	Gln	Gln	Leu	Asn	Asp 95	Leu
5	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Ala	Gly 105	Val	G1u	Glu	Thr	Pro 110	Leu	Met
10	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
15	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
20	Arg	Leu	Arg	Arg	Lys 165	Glu										
25	<211 <212	0> 59 L> 10 2> Pl B> As	56	icia:	l Sec	quenc	ce									
	<220 <223		escr	iptio	on of	f Art	tific	cial	Sequ	ıenc	e: S	ynthe	etic	ami	no a	cid
30	<220 <223		lone	ID 2	2A10											
35)> 5: Asp	9 Leu	Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	I1e	Ser 25	His	Phe	Ser	Сув	Leu 30	Lys	Asp
40	Arg	Tyr	Asp 35	Phe	Gly	Phe	Pro	G1n 40	Glu	Val	Phe	Asp	Gly 45	Asn	Gln	Phe
45	G1n	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Ala	Phe	His	Glu	Met 60	Ile	G1n	G1n	Thr
73	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	A1a 75	Thr	Trp	Glu	Gln	Ser 80
50	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
55	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Met	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140		Glu	Val	Val

50

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

5 Arg Leu Arg Arg Lys Glu 165

<210> 60 <211> 166 <212> PRT

<213> Artificial Sequence

<220>

15 <223> Description of Artificial Sequence: Synthetic amino acid

<223> Clone ID 2C3

20 <400> 60 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 1 5 10 15

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp $25 \hspace{1.5cm} 20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Ser $35 \hspace{1cm} 40 \hspace{1cm} 45$

30 $\,$ Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr $\,$ 50 $\,$ $\,$ 55 $\,$ 60 $\,$

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Asp Thr Trp Asp Ala Thr 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu 85 90 95

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 40 100 105 110

Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 115 120 125

45 Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

55 <210> 61 <211> 166 <212> PRT <213> Artificial Sequence

	<220> <223> Description of Artificial Sequence: Synthetic amino acid														id	
5		<220> <223> Clone ID 2Dl														
10		0> 61 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
10	Leu	Leu	Ala	Gln 20	Met	Arg	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
15	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Ala	Phe	His	Glu	Met 60	Ile	Gln	Gln	Thr
20	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
25	Leu	Leu	Gl u	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu
	Glu	Ala	Cys	Val 100	Ile	Gln	G1u	Val	Gly 105	Met	Glu	Glu	Thr	Pro 110	Leu	Met
30	Asn	G1u	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
35	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
40	Arg	Leu	Arg	Arg	Lys 165	Glu										
45	<210> 62 <211> 166 <212> PRT <213> Artificial Sequence															
	<220><223> Description of Artificial Sequence: Synthetic amino acid															
50	<22 <22		lone	ID :	2D10											
55		0> 6: Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Val	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp

	Arg	His	Asp 35		Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
5	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Ala	Phe	His	Glu	Met 60	Ile	Gln	Gln	Thr
	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Glu	Gln	Ser 80
10	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu
15	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
15	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Arg 125	Arg	Ile	Thr
20	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Va1	Va1
	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
25	Arg	Leu	Arg	Arg	Lys 165	Glu										
30	<213	<210> 63 <211> 166 <212> PRT <213> Artificial Sequence														
35	<220> <223> Description of Artificial Sequence: Synthetic amino ad														no ac	cid
	<22 <22		lone	ID:	2D7											
40		0> 63 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
45	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
	Arg	His	Asp 35	Phe	Arg	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
50	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Glu	Gln	Ser 80
55	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asn 95	Leu

Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met

Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 120 115

- 5 Leu Tyr Leu Thr Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 135
- Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 10 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

15

25

30

50

<210> 64 <211> 166 <212> PRT

<213> Artificial Sequence

20 <220>

<223> Description of Artificial Sequence: Synthetic amino acid

<220> <223> Clone ID 2D9

<400> 64

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile

Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 25

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 4 ∩

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr

40 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser 65

Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu 90

45 Glu Ala Cvs Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Val

Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135

55 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155

Arg Leu Arg Arg Lys Glu 165

5	<211 <212	0 > 65 L > 16 2 > PI 3 > Ar	56	icia	L Sec	quenc	ce									
10	<220 <223		escr	iptic	on of	E Art	tific	cial	Sequ	ience	e: Sy	ynthe	etic	amin	no ac	cid
	<220 <223		Lone	ID 2	2DA2											
15		0> 65 Asp	Leu	Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Pro	Leu 15	Ile
20	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
20	Arg	Gln	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
25	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Met	Gln	Gln	Thr
	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asn	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
30	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	His 90	Gln	Gln	Leu	Asn	Glu 95	Leu
35	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
,,,	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
40	Leu	Tyr 130	Leu	Ile	Glu	Arg	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
45	Arg	Leu	Arg	Arg	Lys 165	Glu										
50	<213	0> 6: 1> 1: 2> P: 3> A:	66	icia	l Sed	quen	ce									
55	<22 <22		escr	ipti	on o	f Ar	tifi	cial	Seq	uenc	e: S	ynth	etic	ami	no a	cid
	<22 <22		lone	ID :	2DH9											

)> 66 Asp	Leu	Pro	Gln 5	Thr	His	Ser	Pro	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Met
5	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp
10	Arg	Tyr	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Gly	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
10	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Va1	Leu	His	G1u	Met 60	Met	G1n	G1n	Thr
15	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Ala	Trp	Glu	Gln	Ser 80
	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Tyr 90	Arg	Gln	Leu	Asn	Asp 95	Leu
20	G1u	A1a	Cys	Val 100	I1e	G1n	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
25	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Arg	Lys	Tyr	Phe	Gln 125	Arg	Ile	Thr
23	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	His	Ser	Pro	Сув	Ser 140	Trp	G1u	Va1	Val
30	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
	Arg	Leu	Arg	Arg	Lys 165	Glu										
35	<21:	0> 6' 1> 1 2> P: 3> A	66	icia	l Se	quen	ce									
40	<22 <22		escr	ipti	on o	f Ar	tifi	cial	Seq	uenc	e: S	ynth	etic	ami:	no a	cid
45	<22 <22		lone	ID	2G11											
50		0> 6 Asp	7 Leu	Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
50	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25		Phe	Ser	Сув	Leu 30	Lys	Asp
55	Arg	His	Asp 35		Gly	Leu	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
	Gln	Lys	Thr	Gln	Ala	Ile	Ser		Leu	His		Met 60		Gln	Gln	Thr

	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Asp 75	Thr	Trp	G1u	Gln	Ser 80
5	Leu	Leu	G1u	Lys	Phe 85	Tyr	Ile	Glu	Leu	Phe 90	Gln	G1n	Leu	Asn	Asp 95	Leu
	G1u	Ala	Cys	Val 100	Ile	Gln	Glu	Va1	Gly 105	Va1	Glu	Glu	Thr	Pro 110	Leu	Met
10	Asn	Va1	Asp 115	Ser	Ile	Leu	Ala	Va1 120	Arg	Lys	Tyr	Phe	G1n 125	Arg	Ile	Thr
15	Leu	Tyr 130	Leu	Thr	Glu	G1u	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
13	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
20	Arg	Leu	Arg	Arg	Lys 165	Glu										
25	<213	0> 68 L> 16 2> PI B> As	56	icia	l Sec	quenc	ce									
30	<220 <220		escr	iptic	on o	EArt	ific	cial	Sequ	ience	e: Sy	ynthe	etic	amin	no ac	cid
30	<220 <220		lone	ID :	2G12											
35)> 68		Pro	Gln	Thr	His						2			
	1	Asp	Leu	110	5			ser	Leu	Gly 10	Asn	Arg	Arg	Thr	Leu 15	Met
40	_	_	Leu		5	Arg	Arg			10					15	
40	Leu	Met		Gln 20	5 Met			Ile	Ser 25	10 Pro	Phe	Pro	Arg	Leu 30	15 Lys	Asp
40	Leu	Met Tyr	Ala Asp	Gln 20 Phe	5 Met Gly	Phe	Pro	Ile Gln 40	Ser 25 Glu	10 Pro Val	Phe Phe	Pro Asp	Arg Gly 45	Leu 30 Asn	15 Lys Gln	Asp Phe
	Leu Arg Gln	Met Tyr Lys 50	Ala Asp 35	Gln 20 Phe Gln	5 Met Gly Ala	Phe Ile	Pro Phe 55	Ile Gln 40 Leu	Ser 25 Glu Phe	10 Pro Val His	Phe Phe Glu	Pro Asp Met 60	Arg Gly 45 Met	Leu 30 Asn Gln	15 Lys Gln Gln	Asp Phe Thr
	Leu Arg Gln Phe 65	Met Tyr Lys 50 Asn	Ala Asp 35 Ala	Gln 20 Phe Gln Phe	5 Met Gly Ala Ser	Phe Ile Thr 70	Pro Phe 55	Ile Gln 40 Leu Asn	Ser 25 Glu Phe	10 Pro Val His	Phe Phe Glu Ala 75	Pro Asp Met 60 Ala	Arg Gly 45 Met	Leu 30 Asn Gln Asp	15 Lys Gln Gln Glu	Asp Phe Thr Thr
45	Leu Arg Gln Phe 65 Leu	Met Tyr Lys 50 Asn	Ala Asp 35 Ala Leu	Gln 20 Phe Gln Phe Lys	5 Met Gly Ala Ser Phe 85	Phe Ile Thr 70	Pro Phe 55 Lys Thr	Ile Gln 40 Leu Asn Glu	Ser 25 Glu Phe Ser	10 Pro Val His Ser Tyr 90	Phe Phe Glu Ala 75 Gln	Pro Asp Met 60 Ala Gln	Arg Gly 45 Met Trp Leu	Leu 30 Asn Gln Asp	Lys Gln Gln Glu Asp 95	Asp Phe Thr Thr 80 Leu
45	Leu Arg Gln Phe 65 Leu Glu	Met Tyr Lys 50 Asn Leu Ala	Ala Asp 35 Ala Leu Asp	Gln 20 Phe Gln Phe Lys Val	5 Met Gly Ala Ser Phe 85 Met	Phe Ile Thr 70 Tyr	Pro Phe 55 Lys Thr	Ile Gln 40 Leu Asn Glu Gly	Ser 25 Glu Phe Ser Leu Arg 105	Tyr 90	Phe Phe Glu Ala 75 Gln Gly	Pro Asp Met 60 Ala Gln Glu	Arg G1y 45 Met Trp Leu Thr	Leu 30 Asn Gln Asp Asn	Lys Gln Glu Asp 95 Leu	Asp Phe Thr Thr 80 Leu

130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 150 155 160

Arg Leu Arg Arg Lys Glu

10 <210> 69 <211> 166 <212> PRT

<213> Artificial Sequence

15 <220>

5

<223> Description of Artificial Sequence: Synthetic amino acid

<220>

<223> Clone ID 2H9

20 <400> 69

Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 1 5 10 15

25 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 20 25 30

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Glu Gln Ser 35 65 70 75 80

Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu 85 90 95

40 Glu Ala Cys Val Thr Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 100 105 110

 $^{\circ}$ Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 115 \$120\$ 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 50 145 150 155 160

Arg Leu Arg Arg Lys Glu 165

55

45

<210> 70 <211> 166

<211> 100 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic amino acid <223> Clone ID 6BC11 <400> 70 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Ala Leu Ile 10 10 Leu Leu Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp 15 Arg Tyr Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Leu Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 20 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Glu Gln Ser Leu Leu Glu Lys Phe Ser Thr Glu Leu Asn Gln Gln Leu Asn Asp Leu 25 Glu Ala Cys Val Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 30 Asn Val Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr 120 115 Leu Tyr Leu Thr Glu Arg Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 135 35 Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 150 155 Arg Leu Arg Arg Lys Glu 40 165 <210> 71 <211> 166 45 <212> PRT <213> Artificial Sequence <223> Description of Artificial Sequence: Synthetic amino acid 50 <220> <223> Clone ID t19bb <220> 55 <221> MOD RES <222> (11) <223> N or D

	<221>	MOD_RES (12) R, S, or K
	<222>	(12)
	<223>	R, S, or K
5	<220>	
-	<221>	MOD RES
	<222>	(15)
	<223>	MOD_RES (15) L or M
10	<220>	
10	<220>	MOD BEG
	-2222	MOD_RES
	-2222	MOD_RES (16) I, M or V
	(223)	I, M OI V
15	<220>	
	<221>	MOD_RES
	<222>	(19)
	<223>	MOD_RES (19) A or G
20	<220>	
	<221>	MOD RES
	<222>	(22)
	<223>	MOD_RES (22) G or R
25	<220>	
	<221>	MOD_RES
	<222>	MOD_RES (24) I or T
	<223>	I or T
30	<220>	
	<221>	MOD_RES
	<222>	(26)
	<223>	MOD_RES (26) P or H
35	<220>	
-	<221>	MOD RES
	<222>	(34)
	<223>	MOD_RES (34) H, Y or Q
40		
40	<220>	WOD DDG
	<221>	MOD_RES
	-2222	MOD_RES (38) F or L
	<223>	F OI L
45	<220>	
	<221>	MOD_RES
	<222>	(40)
	<223>	MOD_RES (40) Q or R
50	<220>	
-	<221>	MOD_RES
	<222>	(45)
	<223>	MOD_RES (45) G or S
55		
55	<220>	MOD BEC
	<2222×	MOD_RED
	<2222	MOD_RES (46) N or H
	-2237	01 11

DOSOUT 68158960

```
<221> MOD RES
     <222> (47)
     <223> Q or R
     <220>
     <221> MOD RES
     <222> (50)
     <223> K or R
10
     <220>
     <221> MOD_RES
     <222> (51)
<223> A or T
15
     <220>
     <221> MOD_RES
     <222> (55)
     <223> S or F
20
     <220>
     <221> MOD_RES
     <222> (56)
     <223> V or A
25
     <220>
     <221> MOD_RES
     <222> (57)
     <223> L or F
30
     <220>
     <221> MOD_RES
     <222> (60)
     <223> M or I
35
     <220>
     <221> MOD_RES
     <222> (61)
     <223> I or M
40
     <220>
     <221> MOD RES
     <222> (67)
     <223> L or F
45
     <220>
     <221> MOD_RES
     <222> (72)
     <223> D or N
50
     <220>
     <221> MOD_RES
     <222> (75)
     <223> A or V
55
     <220>
     <221> MOD_RES
     <222> (76)
```

<223> A or T

<220>

```
<220>
    <221> MOD_RES
    <222> (78)
 5 <223> E or D
    <220>
    <221> MOD_RES
    <222> (79)
10
   <223> Q or E
    <220>
    <221> MOD_RES
    <222> (80)
15
   <223> S. R. T. or N
    <220>
    <221> MOD RES
    <222> (83)
20
    <223> E or D
    <220>
    <221> MOD_RES
    <222> (85)
25
    <223> F or L
    <220>
     <221> MOD RES
    <222> (86)
30
   <223> S or Y
    <220>
    <221> MOD_RES
     <222> (88)
35
    <223> E or G
     <220>
     <221> MOD_RES
     <222> (90)
40
     <223> Y, H, N
     <220>
     <221> MOD_RES
     <222> (95)
45
    <223> D, E, or N
     <220>
     <221> MOD_RES
     <222> (101)
50
    <223> I, M, or V
     <220>
     <221> MOD_RES
     <222> (103)
55
    <223> E or G
     <220>
     <221> MOD RES
```

<222> (105)

```
<223> G or W
    <220>
    <221> MOD RES
   <222> (106)
    <223> V or M
    <220>
    <221> MOD_RES
10
   <222> (107)
    <223> E, G, or K
     <220>
    <221> MOD_RES
15
   <222> (108)
     <223> E or G
     <220>
    <221> MOD_RES
20
    <222> (114)
     <223> V, E, or G
     <220>
    <221> MOD_RES
25
    <222> (116)
     <223> S or P
     <220>
    <221> MOD_RES
30
   <222> (121)
     <223> K or R
     <220>
    <221> MOD RES
35
    <222> (124)
     <223> F or L
     <220>
     <221> MOD_RES
40
     <222> (132)
     <223> T, I, or M
     <220>
     <221> MOD RES
45
     <222> (134)
     <223> K or R
     <220>
     <221> MOD_RES
50
     <222> (140)
     <223> A or S
     <400> 71
     Cys Asp Leu Pro Gln Thr His Ser Leu Gly Xaa Xaa Arg Ala Xaa Xaa
55
                                          10
     Leu Leu Xaa Gln Met Xaa Arg Xaa Ser Xaa Phe Ser Cys Leu Lys Asp
                  20
                                      25
```

	Arg	Xaa	Asp 35	Phe	Gly	Xaa	Pro	Xaa 40	Glu	Glu	Phe	Asp	Xaa 45	Xaa	Xaa	Phe	
5	Gln	Xaa 50	Xaa	Gln	Ala	Ile	Xaa 55	Xaa	Xaa	His	Glu	Xaa 60	Xaa	Gln	Gln	Thr	
	Phe 65	Asn	Xaa	Phe	Ser	Thr 70	Lys	Xaa	Ser	Ser	Xaa 75	Xaa	Trp	Xaa	Xaa	Xaa 80	
.0	Leu	Leu	Xaa	Lys	Xaa 85	Xaa	Thr	Xaa	Leu	Хаа 90	Gln	Gln	Leu	Asn	Хаа 95	Leu	
.5	Glu	Ala	Сув	Val 100	Xaa	Gln	Xaa	Val	Xaa 105	Xaa	Xaa	Xaa	Thr	Pro 110	Leu	Met	
	Asn	Xaa	Asp 115	Xaa	Ile	Leu	Ala	Val 120	Xaa	Lys	Tyr	Xaa	Gln 125	Arg	Ile	Thr	
20	Leu	Tyr 130	Leu	Xaa	Glu	Xaa	Lys 135	Tyr	Ser	Pro	Cys	Xaa 140	Trp	Glu	Val	Val	
	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160	
25	Arg	Leu	Arg	Arg	Lys 165	Glu											
30)> 72 L> 49															
,0	<212	2 > Di	A	icia	l Sed	quen	ce										
35	<220 <22		escr	iptic	on o	f Arı	cifi	cial	Seq	uenc	e: S	ynth	etic	DNA			
	<220 <220		lone	ID (сн1.:	L											
10	<400)> 72	2														
	tgt	gatci	tgc o	ctca	gacc	ca ca	agcc	ttgg	t aa	cagg	aggg	cct	tgat	act	cctg	gcacaa	60
	gagg	ggaaq gaqti	gaa i ttora	atga	caace	ca qi	tcc	agaa	gati	tcaa	gcca	tct	ctgt	cct :	ccat	ccccag gagatg	180
	atco	caaca	aga o	cctt	caat	et e	tca	gcac	a aa	ggac	tcat	ctg	ctac	ttg	ggat	gagaca	240
15																tgcgtg gctgtg	
	aaga	aaata	act	tccga	aagaa	at ca	actc	tcta	t ct	gaca	gaga	aga	aata	cag	ccct	tgtgcc	420
				tcaga ggaa		ga aa	atca	tgag	a tc	tttc	tctt	ttt	caac	aaa	cttg	caaaaa	498
50				99	9944												
		0> 7: 1> 4:															
		2 > DI															
	<21	3> A:	rtif	icia	l Se	quen	ce										
55	<22	0>															
			escr	ipti	on o	f Ar	tifi	cial	Seq	uenc	e: S	ynth	etic	DNA			
	<22	0>															

<210> 76 <211> 498

```
<223> Clone ID CH1.2
    <400> 73
    tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60
    atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg atteeecag 120
    gaggagtttg atggcaacca gttccagaag gctcaaggca tctctgtcct ccatgagatg 180
    atecageaga cettecatet etteageaca aaggaeteat etgetaettg ggaacagage 240
    ctcctaqaaa aattttccac tqaacttaac caqcaqctga atgacctgga agcctgcgtg 300
    atacaggagg ttggggtgga agagacteec ctgatgaatg tggacteeat cetggetgtg 360
10
    aaqaaatact teegaagaat caetetttat etgacagaga agaaatacag eeettgtgee 420
    tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                       498
    agattaagga ggaaggaa
    <210> 74
15
    <211> 498
    <212> DNA
    <213> Artificial Sequence
20
    <223> Description of Artificial Sequence: Synthetic DNA
    <220>
    <223> Clone ID CH1.3
25
    <400> 74
    tgtgatctgc ctcagaccca cagccttggt aacaggagga ctttgatgat aatggcacaa 60
    atgggaagaa tctctccttt ctcctgcctg aaggacagac atgactttgg atttcctcag 120
    gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
    atccagcaga cetteaatet etteagcaca aaggaeteat etgetaettg ggatgagaca 240
30
    cttctagaca aattctacac tgaactttac cagcagctga atgacctgga agcctgtatg 300
    atgraggagg ttggagtgga agaractect etgatgaatg tggactetat cetgactgtg 360
    agaaaatact ttcgaagaat cactctttat ctgacagaga agaaatacag cccttgtgcc 420
     tqqqaqqttq tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
                                                                       498
    agattaagga ggaaggaa
35
    <210> 75
    <211> 498
     <212> DNA
     <213> Artificial Sequence
40
     <223> Description of Artificial Sequence: Synthetic DNA
     <220>
45
     <223> Clone ID CH1.4
     <400> 75
     tgtgatctgc ctcagaccca cagcctgggt aataggaggg ccttgatact cctggcacaa 60
     atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg atteecceag 120
50
    gaggagtttg gtggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180
    atccagcaga cetteaatet etteageaca gaggaeteat etgetgettg ggatgagaee 240
    ctcctagaca aattctacat tgaacttttc cagcaactga atgacctgga agcctgtgtg 300
    atgcaggagg agagggtggg agaaactccc ctgatgaatg cggactccat cttggctgtg 360
     aagaaatact tocaaagaat cactotttat otgacagaga agaaatacag coottgtgoo 420
55
     tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480
     agattaagga ggaaggaa
```

<212> DNA <213> Artificial Sequence 5 <223> Description of Artificial Sequence: Synthetic DNA -22N-<223> Clone ID CH2.1 10 <400> 76 tqtqatctqc ctcagaccca cagccttggt aacaggagga ctttgatgat aatggcacaa 60 atgggaagaa teteteetti eteetgeetg aaggacagae atgaettigg attteeteag 120 gaggagtttg atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180 atccagcaga cottoaatot ottcagcaca aaggactcat otgotacttg ggatgagaca 240 15 cttctagaca aattctacac tgaactttac cagcagctga atgacctgga agcctgtatg 300 atacaggagg ttggggtgga agagactccc ctgatgaatg aggactccat cttggctgtg 360 aagaaatact toogaagaat cactototat otgacagaga agaaatacag coottgtgoo 420 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 498 agattaagga ggaaggaa 20 <210> 77 <211> 498 <212> DNA <213> Artificial Sequence 25 <220> <223> Description of Artificial Sequence: Synthetic DNA <220> 30 <223> Clone ID CH2.2 <400> 77 tgtgatctgc ctcagaccca cagccttggt aacaggaggg ccttgatact cctggcacaa 60 atgggaagaa tototoottt otootgtotg atggacagac atgactttgg atttocccag 120 qaggagtttg atgacaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180 35 atccaacaga cottcaatot ottcagcaca aaggactcat otgotacttg ggatgagaca 240 cttctagaca aattctacac tgaactttac cagcagetga atgacctgga agcctgtatg 300 atgcaggagg ttggagtgga agacactcct ctgatgaatg tggactctat cctgactgtg 360 aagaaatact toogaagaat cactotttat otgacagaga agaaatacag coottgtgoo 420 40 tgggaggttg tcagagcaga aatcatgaga tctttctctt tttcaacaaa cttgcaaaaa 480 agattaagga ggaaggaa <210> 78 <211> 498 45 <212> DNA <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Synthetic DNA 50 <220> <223> Clone ID CH2.3 <400> 78 55 tqtqatctqc ctcaqaccca cagccttggt aacaggagga ctttgatgat aatggcacaa 60 atgggaagaa teteteettt eteetgeetg aaggacagae atgaetttgg attteeteag 120 qaqqaqtttq atggcaacca gttccagaag gctcaagcca tctctgtcct ccatgagatg 180 atccaqcaga cottcaatct ottcagcaca aaggactcat otgotacttg ggatgagaca 240 cttctagaca aattctacac tgaactttac cagcagctga atgacctgga agcctgtatg 300

5	atgcaggagg aagaaatact tgggaggttg agattaagga	tccgaa tcagag	agaat ca gcaga aa	actctct	at ct	gaca	gaga	agaa	aatao	cag o	cctt	gtgcc	420
	<210> 79 <211> 166 <212> PRT <213> Arti	ficial	Sequenc	ce									
10	<220> <223> Desc	riptior	n of Art	ificia	l Seq	uence	e: Sy	nthe	etic	amir	no ac	eid	
15	<220> <223> Clone	e ID CF	H1.1										
20	<400> 79 Cys Asp Le	ı Pro (Gln Thr 5	His Se	r Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile	
20	Leu Leu Ala	a Gln M 20	Met Gly	Arg Il	e Ser 25	Pro	Phe	Ser	Cys	Leu 30	Met	Asp	
25	Arg His As		Gly Phe	Pro Gl 4		Glu	Phe	Asp	Asp 45	Asn	Gln	Phe	
	Gln Lys Ala	a Gln A	Ala Ile	Ser Va 55	l Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr	
30	Phe Asn Le	ı Phe S	Ser Thr 70	Lys As	p Ser	Ser	Ala 75	Thr	Trp	Asp	Glu	Thr 80	
35	Leu Leu As	p Lys I	Phe Tyr 85	Thr Gl	u Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu	
33	Glu Ala Cy	s Val 1	Ile Gln	Glu Va	1 Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met	
40	Asn Glu As		Ile Leu	Ala Va 12		Lys	Tyr	Phe	Arg 125	Arg	Ile	Thr	
	Leu Tyr Le	u Thr (Glu Lys	Lys Ty 135	r Ser	Pro	Cys	A1a 140	Trp	Glu	Val	Val	
45	Arg Ala Gl	ı Ile N	Met Arg 150	Ser Ph	e Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160	
50	Arg Leu Ar		Lys Glu 165										
55	<210> 80 <211> 166 <212> PRT <213> Arti	ficial	Sequenc	ce									
	<220> <223> Desc	ription	n of Ar	tificia	1 Seq	uenc	e: Sy	nthe	etic	amiı	no a	cid	

	<22 <22	0> 3> C:	lone	ID (СН1.	2										
5		0> 80 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
10	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Ası
10	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe
15	Gln	Lys 50	Ala	Gln	Gly	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thi
	Phe 65	His	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Glu	Gln	Sei 80
20	Leu	Leu	Glu	Lys	Phe 85	Ser	Thr	Glu	Leu	Asn 90	Gln	Gln	Leu	Asn	Asp 95	Le
25	Glu	Ala	Cys	Val 100	Ile	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
	Asn	Val	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Arg 125	Arg	Ile	Th
30	Leu	Tyr 130	Leu	Thr	Glu	ГÀг	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Va:
	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Ly:
35	Arg	Leu	Arg	Arg	Lys 165	Glu										
40	<21 <21	0> 8: 1> 10 2> PI 3> A:	56 RT	icial	L Sec	quen	ce									
45	<22 <22	0> 3> De	escr	iptio	on o	E Ar	tific	cial	Seq	uence	e: S	ynthe	etic	amiı	no ac	cid
	<22 <22	0> 3> C	lone	ID (сн1.	3										
50		0> 83 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Thr	Leu 15	Me
55	Ile	Met	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Ası

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe $35 \ \ \, 40 \ \ \, 45$

	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
5	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Asp	Glu	Thr 80
	Leu	Leu	Asp	Lys	Phe 85	Tyr	Thr	Glu	Leu	Tyr 90	Gln	Gln _,	Leu	Asn	Asp 95	Leu
10	Glu	Ala	Cys	Met 100	Met	Gln	Glu	Val	Gly 105	Val	Glu	Asp	Thr	Pro 110	Leu	Met
15	Asn	Val	Asp 115	Ser	Ile	Leu	Thr	Val 120	Arg	Lys	Tyr	Phe	Arg 125	Arg	Ile	Thr
13	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Суз	Ala 140	Trp	Glu	Val	Val
20	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
	Arg	Leu	Arg	Arg	Lys 165	Glu										
25	<21 <21	0> 8: 1> 10 2> Pi 3> A:	66	icia	l Se	quen	ce									
30	<22 <22		escr	ipti	on o	f Ar	tifi	cial	Seq	uenc	e: S	ynth	etic	amin	no a	cid
35	<22 <22		lone	ID (СН1.	4										
40	<40 Cys 1		2 Leu	Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
40	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Суѕ	Leu 30	Lys	Asp
45	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Gly	Gly 45	Asn	Gln	Phe
	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
50	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Glu	Asp	Ser	Ser	Ala 75	Ala	Trp	Asp	Glu	Thr 80
55	Leu	Leu	Asp	Lys	Phe 85	Tyr	Ile	Glu	Leu	Phe 90		Gln	Leu	Asn	Asp 95	Leu
55	Glu	Ala	Сув	Val		Gln	Glu	Glu	Arg		Gly	Glu		Pro		Met

Asn Ala Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Gln Arg Ile Thr \$173\$

35

45

50

115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 155 160

Arg Leu Arg Arg Lys Glu 10 165

<210> 83 <211> 166 15 <212> PRT

5

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic amino acid 20

<220>

<223> Clone ID CH2.1

<400> 83

25 Cys Asp Leu Pro Gln Thr His Ser Leu Gly Asn Arg Arg Thr Leu Met 1 5 10 15

Ile Met Ala Gln Met Gly Arg Ile Ser Pro Phe Ser Cys Leu Lys Asp $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Asp Gly Asn Gln Phe 35 40 45

Gln Lys Ala Gln Ala Ile Ser Val Leu His Glu Met Ile Gln Gln Thr 50 55 60

Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Thr Trp Asp Glu Thr 65 70 75 80

40 Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu 85 90 95

Glu Ala Cys Met Ile Gln Glu Val Gly Val Glu Glu Thr Pro Leu Met 100 $$105\$

Asn Glu Asp Ser Ile Leu Ala Val Lys Lys Tyr Phe Arg Arg Ile Thr 115 120 125

Leu Tyr Leu Thr Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val 130 135 140

Arg Ala Glu Ile Met Arg Ser Phe Ser Phe Ser Thr Asn Leu Gln Lys 145 150 155 160

55 Arg Leu Arg Arg Lys Glu 165

<210> 84

	<212	l> 16 2> PF 3> Ar	RT	cial	. Sec	quenc	ce									
5	<220 <220	0> 3> De	escri	ptic	on of	E Art	ific	cial	Sequ	ience	e: Sy	nthe	etic	amir	o ac	id
10	<220 <220	0> 3> C1	one	ID (сн2.2	2										
)> 84 Asp		Pro	Gln 5	Thr	His	Ser	Leu	Gly 10	Asn	Arg	Arg	Ala	Leu 15	Ile
15	Leu	Leu	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Met	Asp
20	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Asp 45	Asn	Gln	Phe
20	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr
25	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Asp	Glu	Thr 80
	Leu	Leu	Asp	Lys	Phe 85	Tyr	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu
30	Glu	Ala	Cys	Met 100	Met	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met
35	Asn	Val	Asp 115	Ser	Ile	Leu	Thr	Val 120	Lys	Lys	Tyr	Phe	Arg 125	Arg	Ile	Thr
55	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Cys	Ala 140	Trp	Glu	Val	Val
40	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160
	Arg	Leu	Arg	Arg	Lys 165	Glu										
45	<21 <21	0> 8: 1> 1: 2> Pi	56 RT													
50	<22															
55	<22	3> De 0> 3> C:		_			LIEI	U1a1	seq	uenc	e: 5]	YIICN	SCIC	amlI	io a	-ru
JJ	<40	3> C 0> 8: Asp	5				His	Ser		Gly		Arg	Arg	Thr	Leu 15	

	rle	Met	Ala	Gln 20	Met	Gly	Arg	Ile	Ser 25	Pro	Phe	Ser	Cys	Leu 30	Lys	Asp	
5	Arg	His	Asp 35	Phe	Gly	Phe	Pro	Gln 40	Glu	Glu	Phe	Asp	Gly 45	Asn	Gln	Phe	
10	Gln	Lys 50	Ala	Gln	Ala	Ile	Ser 55	Val	Leu	His	Glu	Met 60	Ile	Gln	Gln	Thr	
10	Phe 65	Asn	Leu	Phe	Ser	Thr 70	Lys	Asp	Ser	Ser	Ala 75	Thr	Trp	Asp	Glu	Thr 80	
15	Leu	Leu	Asp		Phe 85	Tyr	Thr	Glu	Leu	Tyr 90	Gln	Gln	Leu	Asn	Asp 95	Leu	
	Glu		Сув	Met 100	Met	Gln	Glu	Val	Gly 105	Val	Glu	Glu	Thr	Pro 110	Leu	Met	
20	Asn	Glu	Asp 115	Ser	Ile	Leu	Ala	Val 120	Lys	Lys	Tyr	Phe	Arg 125	Arg	Ile	Thr	
25	Leu	Tyr 130	Leu	Thr	Glu	Lys	Lys 135	Tyr	Ser	Pro	Сув	Ala 140	Trp	Glu	Val	Val	
25	Arg 145	Ala	Glu	Ile	Met	Arg 150	Ser	Phe	Ser	Phe	Ser 155	Thr	Asn	Leu	Gln	Lys 160	
30	Arg	Leu	Arg	Arg	Lys 165	Glu											
35	<21:	0> 86 1> 1: 2> Di 3> Ai	5 NA	icia:	l Sed	quenc	ce										
40	<40		5			E Art	ifi.	cial	Seqi	uence	e: Sy	ynth	etic	DNA			15
45	<21 <21 <21	0> 8' 1> 20 2> Pi 3> Ai	7 6 RT			quen	ce										
50	<22 <22		escr:	iptio	on o	E Ar	tifi	cial	Seq	ıenc	e: S	ynth	etic	ami	no a	cid	
55				Val	Arg 5	Ser	Glu	Ile	Met	Arg 10		Phe	Ser	Tyr	Ser 15	Thr	
-	Asn	Leu	Gln	Arg 20	Arg	Leu	Arg	Arg	Lys 25	Asp							

22107 00
<211> 26
<212> PRT
<213> Artificial Sequence
<220><223> Description of Artificial Sequence: Synthetic amino acid
<400> 88
Trp Glu Leu Val Arg Ala Glu Ile Val Arg Ser Phe Ser Phe Ser Thr
1 5 10 15
Asn Leu Asn Lys Arg Leu Arg Lys Lys Glu
20 25